

Chapter 7 System of Equations**Section 7.5: Using Elimination to Solve system of Linear Equations**

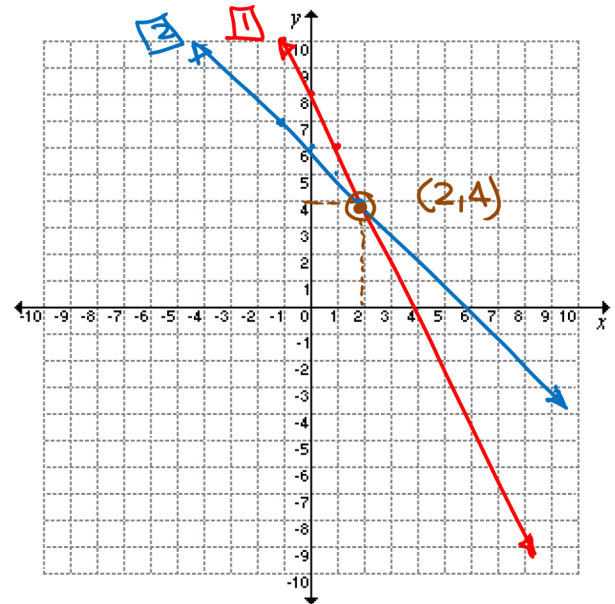
Here is another way to solving linear systems using algebra. Once again, it involves eliminating one of the variables...but in a different fashion than the last section!

Linear systems have two basic properties that we will need to know before we can learn this new way of solving system of linear equations.

Recall from Section 7.2 the question... Solve the following system graphically. Make a table of values

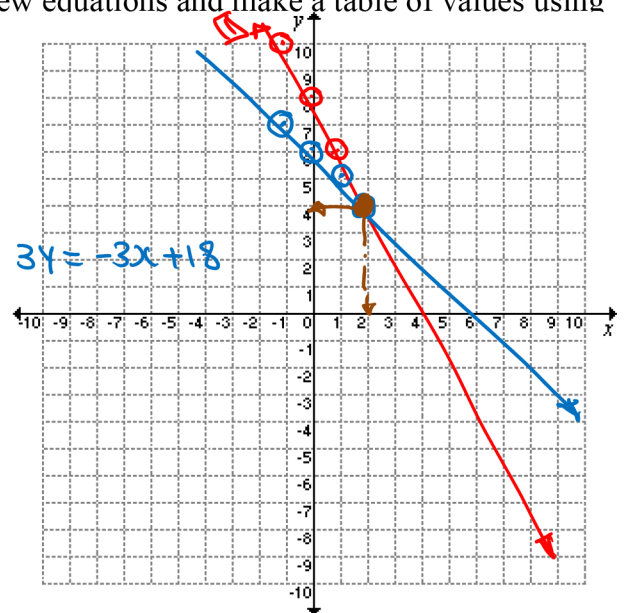
$$y = -2x + 8 \longrightarrow \boxed{1}$$

$$x + y = 6 \longrightarrow \boxed{2}$$



Solution: _____

Investigation #1: Consider what happens if we multiply both sides of the first equation by 2 and both sides of the second equation by 3. Write out the new equations and make a table of values using the same x-values as above. Also graph it out...



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What do you notice?

Property #1: When you multiply both sides of either equation of a linear system by a constant,

does not change the solution because the linear systems that are formed are equivalent